

MEDICAL PATHOLOGY AND THERAPEUTICS, AND PRACTICAL MEDICINE.

9. *Epidemic of Diphtheria*.—Dr. R. W. CRIGHTON, of Chapel-en-le Frith, gives (*Edinburgh Medical Journal*, February, 1860) an instructive account of an epidemic diphtheria, which occurred last year in his neighbourhood. He attended 45 cases, of which 25 were males, and 20 females. In all, the disease appeared on the fauces, or fauces and air-passages—the only exception being a case of diphtheria of the vulva, in a child aged 1 year and 9 months, the youngest of those he saw. The oldest was 44 years of age; 12 were under the age of 5; 25 under 10; and 35 under 15 years.

Of the 45 cases, 9 proved fatal, or 1 in 5; of these, 6 died by *asphyxia*, from extension of the disease to the air-passages, and 3 by *asthenia*, after all traces of the exudation had disappeared, and without any evidence of embarrassed respiration.

With regard to the treatment, Dr. C. says: "Every one, I believe, who has seen much of genuine diphtheria, will at once exclude it from the list of 'self-limited disorders,' and will readily admit the truth of the statement made by Bretonneau,¹ 'that it is the nature of diphtheritic inflammation to encroach from spot to spot, and not to be extinguished on the points which it previously occupied; . . . and if the most efficacious therapeutical plans are not directed against these tendencies, that the extension of the disease into the air-passages cannot be prevented.'

"The first three cases that came under my care were treated with local applications of a strong solution of nitrate of silver, and chlorate of potash internally, and they all proved fatal.

"Having been for several years² convinced of the great value of the muriated tincture of iron in erysipelas and many other forms of inflammation, I determined on trying the remedy in diphtheria; and finding that Dr. Heslop, of Birmingham, had employed it with great success in this disease, along with the application of muriatic acid to the affected surface, I adopted this method of treatment in six cases. Of these, two died; but the disease was so far advanced in both, when I first saw them, that their prospect of recovery, under any treatment, was very small indeed.

"In watching the progress of some cases which occurred soon afterwards, I became convinced that stimulating the cutaneous circulation, and promoting diaphoresis in the early stage of the affection, were valuable additions to the treatment.

"I accordingly, during the remaining part of the epidemic, gave for the first few days from a drachm to two drachms of the liq. acet. ammoniac, along with the tinct. ferri muriat., in doses of from four to eight minims, every two or three hours.

"The local application which, after many trials, I found most generally useful, was a mixture of equal parts of dilute muriatic acid and the muriated tincture of iron, with a varying proportion of water according to the age of the patient, but never exceeding the amount of the acid and the tincture. The importance of early local treatment in diphtheria is very great—as great, I believe, as the early performance of the crucial incision in a case of carbuncle; for though it is true that diphtheria is formidable as a constitutional affection, and sometimes proves fatal, after all local traces of the disease have disappeared, still, the risk of invasion of the air-passages by the deposit, and the increasing severity of the general symptoms, while the exudation extends, at once suggest the necessity of endeavouring to limit it.

"When applied to the exudation in its early stage, the acid mixture coagulates, and loosens it so completely, that it is generally adherent to the surface

¹ Memoirs on Diphtheria, New Sydenham Society, p. 135.

² Monthly Journal of Medical Science, Dec., 1852.

of the sponge (or, what I have generally used, a strip of lint tied round a thin piece of wood with a rounded extremity), or expectorated shortly afterwards. It may reappear subsequently at other points, which require the same treatment. When the pellicle has existed for several days, the application of the acid mixture causes it to shrivel and become dark in colour, and seems to check the serous secretion proceeding from it so as to oppose its specific action on the adjacent mucous membrane. The application, during the first few days, was generally repeated twice in the twenty-four hours.

"Throughout the progress of the disease, I found alum gargles useful in checking the excessive secretion from the mouth and fauces. I had not treated many cases before I found the necessity of resorting (in most cases from the very commencement) to stimulants, and the most strongly nutritive diet, as brandy and beef-tea; and these, in general, could not be withdrawn until an advanced period of the convalescence. After the first few days, and when, in general, diaphoresis had been established, I discontinued the use of the acetate of ammonia, and substituted quinine, dissolved in the muriated tincture of iron; a combination which was of great service in restoring tone to the system. Cod-liver oil, also, was in many scrofulous-looking subjects, who suffered severely from diphtheria, of great value in this respect. I did not employ mercury in the cases of diphtheric croup, as the report of the trials made by Bretonneau did not offer much encouragement, and as most of the subjects so affected presented strong indications of the scrofulous diathesis; the sulphate of copper was used in two cases; and in one, as formerly noticed, with success.

"Tracheotomy was proposed in one case, but was declined by the parents, on the ground of their having heard of a case in which it had shortly before been performed with a fatal result.

"In conclusion, I may mention that, of the last nineteen cases treated, as I have endeavoured to describe, only one died; and this great diminution in mortality I ascribe not so much to the diminished virulence of the epidemic, as, in part, to a more suitable method of treatment having been adopted than at the commencement, but chiefly, to nearly all the later cases having been seen early."

10. *On the Epidemic of Variola in the Canton of Geneva in 1858-'59.*—The following is the summing up of M. Marc D'Espey's elaborate memoir on this subject:—

"The epidemic of 1858-'59 has been by far the most severe of all those which have visited the canton since the introduction of vaccination. It attacked 21 individuals in 1000 inhabitants, and gave rise to 2.3 deaths, one-half of these depending upon a hemorrhagic cause. There are probably few of the countries of Europe which have been recently visited by this disease that have paid so large a tribute to it as the Canton of Geneva. The mortality has been 10.8 per 100 cases—45 per cent. in the non-vaccinated and 9.5 per cent. in the vaccinated. How considerable this proportion is may be judged by the results of the inquiry instituted by the London Epidemiological Society, from which it resulted that the mortality in different countries of Europe oscillated between 0 and 12 per cent. in the vaccinated, and between 15 and 53 per cent. in the non-vaccinated. This great mortality of Geneva, exceeding that of any other locality or town situated in the basin of the lake, is explicable by the large number of cases of hemorrhagic variola.

Complete unanimity exists among the documents furnished upon the Genevese epidemic, and those derived from other countries as to the greater liability of males. The relation is four to seven females for ten males, according to the epidemics or localities.

The elective age of natural variola is childhood and infancy. In countries in which vaccination is but little or not at all practised, variola attacks but few adults; but in proportion as a population has been more generally, and for a longer period, submitted to the vaccine influence, variola attacks a larger proportion of the older vaccinated, and spares children protected still by recent vaccination. In those countries in which nearly the whole of the new-born infants have been vaccinated for a long time past, it is from the twentieth to the

twenty-fifth year that variola attacks most of its subjects; children below ten years being rarely affected.

Revaccination, made at opportune periods, greatly increases the chances of preservation, and evidently alleviates the disease in those individuals whom it has not been able to secure against the attack. It seldom succeeds in producing satisfactory pustules until after ten years of age. On this account, then, and because the first vaccination affords sufficient protection at least until ten years, it is at about from the twelfth to the fifteenth year that the first revaccination should be performed. A second may be resorted to at about the age of thirty; but this is of less consequence than the first, inasmuch as the examination of facts show that the chance of contracting variola diminishes much after the age of thirty. Nevertheless, just as the more general practice of vaccination has transposed the age of the maximum of frequency of variola from infancy to the fifteenth, twentieth, or even the twenty-fifth year, a generalization of the practice of revaccination at about the twelfth or fifteenth year may thrust back this maximum beyond thirty years; and we may predict that with the progress of primary vaccination, a second towards the thirtieth, and even a third towards the fortieth year, may one day become requisite. Vaccination or revaccination, practised even at the height of an epidemic, when complicated by an immediate invasion of the variola, neither modifies the progress of this, nor is itself modified by it. We may therefore vaccinate during an epidemic with impunity.

It would seem that a first variola preserves somewhat more certainly from variola than a first vaccination; but that if variola does supervene, that which is secondary is more fatal than is the varioloid following vaccination.

Cow-pock appears to succeed somewhat better than the chain of Jennerian virus, both as a prophylactic, and as to the pustules it gives rise to; but virus passed from man to the cow, and then from the animal to man, derives no advantage from such passage.

Epidemic variola attacks preferentially the strong and healthy portion of a population, rarely following an acute disease, or complicating a chronic diathesis. Pregnancy and alcoholism are two conditions in which variola is found oftener arising than in disease properly so called; but the prognosis is far more favourable in variola occurring in a state of health, or in the course of a normal pregnancy, than among persons seized under different conditions. The disease is especially fatal among those who have committed abuses of alcoholic drinks.

The epidemic of the Canton of Geneva, and of other districts situated in the basin of the lake, has furnished in every hundred cases of the disease sixty or seventy cases of direct and slight variola, and from thirty to forty cases of confluent or dangerous variola. Intense prodromes were not always followed by the dangerous form of the disease, but slight prodromes were always succeeded by a slight and benign form. Suppurative fever was manifested in the majority of the unvaccinated and in five per cent. of the vaccinated. Some instances of confluent variolous eruption, strictly limited to the face, were noted during the epidemic, and cases of *variola sine variolix*, few in number in Geneva itself, were met with in more abundance in other localities.

The *hemorrhagic form* was manifested at all the points of the basin of the lake at which the variola appeared, but with varying frequency in different localities. The Canton of Geneva exhibited the largest proportion, seven per cent. of the cases presenting the hemorrhagic form. At Aigle and Ivorne, where the number of cases were ten times more numerous than at Geneva, there were scarcely seven hemorrhagic variolas in 1000 cases. In the Genevese epidemic one case in five of hemorrhagic variola were cured, but in these the hemorrhage consisted merely in epistaxis or metrorrhagia supervening during the course of the variola. There were very few cutaneous hemorrhages among the cases cured. The hemorrhagic form was observed to be twice more frequent among the unvaccinated than the vaccinated; but eliminating the slight cases, which belonged exclusively to the vaccinated, and comparing only the serious cases of the two categories, we then find more hemorrhagic cases among the vaccinated. Comparing the deaths, there were twenty-three per cent. of the unvaccinated, and sixty-five per cent. of the vaccinated which presented the hemorrhagic form; so that while it is only one of various causes of death among

the unvaccinated, it is the chief, if not the only cause among the vaccinated. It was observed that hemorrhage complicated a great number of cases of different diseases during the autumn of 1858, the period when the hemorrhagic form of variola was at its maximum of frequency at Geneva. It was chiefly between the ages of twenty and forty that this hemorrhagic form was observed among the vaccinated. Death occurred about the sixth day (the third of the eruption) in one-half of the fatal cases.

The mean duration of the variola at Geneva was fourteen days in cases which recovered, and eleven and a half days in those which succumbed. The mean duration of the prodromes was from three to four days, and that of the eruption, until the period of desiccation or supuration, from three to seven days. In some cases there was observed a successive development of the eruption, so that certain of the papule appeared five or six days after the first, and died away without undergoing further development."—*Med. Times and Gaz.*, Dec. 17, from *Archives Gén.*, tom. xiv.

11. *Epidemic of Variola in Prussia in 1858.*—Variola, which had acquired a considerable extension in Prussia during 1857, increased very much in 1858, both as regarded the number of localities invaded, and the number of individuals attacked. In some places it assumed an intensity which called to mind the ravages of the cholera. In 1857 there occurred throughout the entire monarchy 8,922 cases, but in 1858 there were 30,843 cases observed in 2,668 localities. Of this number 2,789 individuals died, a mortality therefore of 9 per cent., that of 1857 having been 10 per cent. The provinces in which the disease was most prevalent were those in which were the slightest mortality (7 or 8 per cent.), as compared with Westphalia (15 per cent.), where it was much less common. This has arisen from the slighter cases having been more promptly reported in some provinces than in others. Some districts exhibited a remarkable amount of mortality, as did others as remarkable a mildness. Thus while in the Arnsberg district the mortality rose to 20 per cent., in the Cologne district it was not more than 3 per cent. Of the 30,843 cases, 8,634 were children under 15 years of age, and 22,209 individuals older than 15. Of the children, however, 15 per cent. died, and of the adults 7 per cent. This disposition of the disease to prove fatal in children exhibited itself very markedly in certain localities. Thus in Berlin 23 per cent. of the children and but 5 per cent. of the adults died; in the government of Frankfort, 9 per cent. as compared to 2 per cent.; in the government of Magdeburg, 19 per cent. as compared to 4 per cent.; and in that of Arnsberg, 31 per cent. children to 11 per cent. adults. In very few localities, indeed, were the proportions alike in both cases. Berlin has not been free from variola during the last twenty-six years, the number of cases having varied from so few as 6 in 1855, to 690 in 1850; but in 1858, the epidemic which had commenced in 1857 (with 596 cases), gave rise to 4,535 cases with 406 deaths.

Of the 30,843 patients, 25,995 had been vaccinated, and 4,758 were unvaccinated. There were, therefore, 15 per cent. unvaccinated. The proportion was 10 per cent. in the adult (2,331 in 22,209 cases), and 28 per cent. in the children (2,427 in 8,634 cases). Of the 25,995 vaccinated, 1,730 died, i. e. 7 per cent.; and of the 4,758 unvaccinated, 1,055 died, i. e. 22 per cent. A mortality of two-thirds less in those submitted to vaccination, strongly exhibits the power of this in mitigating the severity of the disease. This influence is somewhat less manifested in the children than in the adults; for while of the 6,187 who had been vaccinated, 503 (8 per cent.) died; of the 19,808 of the vaccinated adults, 1,227 (6 per cent.) died. The mortality in the non-vaccinated also varied considerably. Of 2,427 children, 782 (32 per cent.) died; and of 2,331 adults, 273 (12 per cent.) died. Summing up the figures, we find, then, that in vaccinated children 8 per cent., and in unvaccinated 32 per cent. (i. e. four times as many), die; in vaccinated adults 6 per cent., and in unvaccinated 12 per cent. (twice as many), die. These facts surely speak highly for the protective power of vaccination, and for its beneficial influence on the course of the disease. The whole of the recruits for the army, about 40,000 per annum, are revaccinated; and revaccination being always resorted to when epidemics exist, the prevalence of small-pox within its ranks has been almost entirely prevented.—*Med. Times and Gaz.*, Feb. 11, 1860, from *Medicin. Zeitung*, 1859.

12. *Varicellous Orchitis and Ovaritis*.—M. BERAUD draws attention, in an essay in the *Archives Générales* (tom. xiii.), to the frequency of the occurrence of orchitis during the course of variola, a coexistence quite ignored by writers on the disease, and only casually glanced at by MM. Velpeau and Gosselin. Of its reality the author has been able to convince himself by clinical observation, and by an examination of the large number of bodies of persons dying of variola brought for dissection during the three years he was prosector.

Pathological Anatomy of Varicellous Orchitis.—The affection has been observed under two forms; *peripheric orchitis*, by very much the most frequent form, and a *parenchymatous orchitis*. The *peripheric* form, again, is divisible into two distinct varieties; in one of which inflammation of the serous membrane is the essential feature, and in the other an inflammation of the tail of the epididymis, accompanied by a plastic deposit.

The inflammation of the *tunica vaginalis* is in the great majority of cases partial, the parietal layer, too, being almost exclusively affected. At the inflamed spots, which are usually situated below, the serous membrane is injected and rugous, and sometimes there is an infiltration resembling chemosis. There is usually a small quantity of limpid or yellowish fluid, which is also generally accompanied by false membranes of a bright yellow colour, floating in the liquid. They have a striking resemblance in colour to the contents of varicellous pustules. Besides the *vaginitis*, in most of the cases there is a *plastic deposit* near the tail of the epididymis. It is of a yellowish colour, much resembling the plastic matter met with in the *tunica vaginalis*. Sometimes so small as to be hardly visible, in most cases the deposit varies from a small almond to a filbert in size. Its consistency is considerable, so that it is not crushed when pressed. Its structure is laminated, like the layers deposited within an aneurismal sac. The testicle, as well as the rest of the genito-urinary apparatus, remained in this form unaffected.

The *parenchymatous form* of varicellous orchitis is of much rarer occurrence, the author having only met with one instance, which he gives in considerable detail.

Causes and Mode of Production of Varicellous Orchitis.—With respect to the cause, nothing in fact can be stated beyond that it is due to the varicellous condition prevailing. Its occurrence will, however, be found to be one of considerable frequency, when attention is more directed to the subject; and the author did not find it wanting in more than three or four out of twenty cases of fatal variola that came under his notice. Although occasionally met with in lads, it is mostly found at the adult age, when the organ is in full vigour. Its occurrence does not seem to be favoured by a prior morbid condition, for in almost all the author's cases the most complete integrity of the organ was found to exist. Tempted at first to believe that the inflammation in the *peripheric form* was propagated from the skin to the serous membrane, the author soon saw reason to abandon this view, and to conclude that it was primarily and spontaneously developed at the serous surface, as also that it was quite independent of any so-called metastatic action.

Symptoms of Varicellous Orchitis.—With few exceptions the orchitis is bilateral, the left side being that generally most seriously affected. The affection of the testicle, too, appears to come on at the same time with the eruption of the skin, and to undergo development simultaneously with it. In the *peripheric form* one of the earliest signs is tumefaction, but this is usually but slight, confined to the lower portion of the testis, and accompanied with but little fluctuation. There is no redness of the skin beyond that induced by the presence of pustules; but the pain and tenderness are very considerable. A very remarkable sensation of *frottement* is produced in bringing the two opposite surfaces of the *tunica vaginalis* together by gently pressing up the testis towards the ring. Where there is the fibrinous deposit near the tail of the epididymis, this gives rise to a small painful tumour in that region. When the active inflammation of the serous membrane is coexistent with this deposit, the tumefaction and pain are much more considerable than when either of these states exists alone. The *parenchymatous form* is characterized by different symptoms, ac-

cordingly as the testis is alone affected, or is so in common with the tunica vaginalis: but, as already stated, this form is very rarely met with.

Termination and Treatment of Variculous Orchitis.—The only termination of the peripheric form that has been observed is by resolution, although abscess might have been predicated from the violence the inflammation sometimes assumes. It is probable that some of the so-called *critical abscesses*, observed at the termination of variola, are really examples of the termination of an orchitis which originated at the commencement of the eruptive stage of the variola. The cellular tissue surrounding the tail of the epididymis, is in such case the probable seat of the abscess. The mere inflammation of the tunica vaginalis easily undergoes complete resolution. In general towards the twentieth day the patient is cured both of the principal disease of this concomitant affection: and there is no example of the orchitis passing into a chronic condition—the plastic deposit around the epididymis requiring, however, a variable period for its entire removal. As to treatment, that this need not be active is evident from the fact of the affection usually passing unperceived and becoming spontaneously cured. Still, it is probable that the so-called critical suppurations met with in the scrotum, and met with at the end of variola, might be prevented by attention being paid to the earlier stage of inflammatory action. The author suggests the application of *emplastrum Vigo* to the scrotum, as a means both of limiting the development of pustules, and of beneficially influencing any serous inflammation that may exist. A suspensory bandage should be employed from the commencement.

Variculous Ovaritis.—The author's attention was directed to this by analogy: and observation has since confirmed his anticipations. Although he has repeatedly observed the symptoms of the affection clinically, and has no reason to believe it is rarer than the orchitis, he is at present in a condition to publish only three cases verified by autopsies. More cases will doubtless soon follow now the subject has been brought forward. He believes that there is a peripheric and a parenchymatous form of the affection; and that the prognosis will not be found so favourable as in the case of orchitis. May not some of the instances of peritonitis supervening upon variola have originated in this condition? At all events, in future, the fixed pain and tenderness in the iliac regions observed during variola calls for treatment by leeching, etc.

13. *Dilatation of the Stomach.*—M. RILLIET, of Geneva, having met with two cases of this affection, has taken the occasion to prepare a small monograph upon the subject. With the exception of Duplay's collection of cases, published in the *Archives* in 1833, there has been nothing special written about it, although it is noticed in most treatises of pathology. It has, indeed, been too much regarded as merely appertaining to the domain of pathological anatomy, or as constituting only an unimportant epiphenomenon of a necessarily fatal disease. It may, however, be the result of a purely dynamic influence, as paralysis, or may be connected with a curable lesion, such as simple ulcer of the stomach. When it is added that dilatation of the stomach has given rise to serious errors of diagnosis, enough will have been said to show that its consideration is not devoid of practical interest. Allusion here is not intended to be made to the state of temporary dilatation met with in tympanites or bulimia.

We have no exact mensurations of the stomach in the varying conditions of emptiness and repletion; but we may consider dilatation to exist when the large curvature descends to the level of the umbilicus, and that the dilatation is very great when it reaches the pubis. Between these two extremes there may be various degrees; but what especially characterizes a morbid dilatation is the ease with which it is produced, and the difficulty or impossibility there is for subsequent contraction to take place. Great dilatation of the stomach may, indeed, be produced by enormous eating; but then, in proportion as the organ gets rid of its superfluity, it resumes its normal size and position. But in the morbid condition, even when it has become quite or partly empty, it remains just as dilated, the muscular coat having in great part lost its contractile energy. In proportion to the increase of the size of the stomach the other organs undergo displacement, and analogous phenomena are observed to those which ensue upon

the development of a tumour in the cavity of the abdomen. In a practical point of view, it is of importance to know that the stomach may become so dilated as to fill the entire abdomen. In proportion as the dilatation increases, the cardiac and pyloric orifices approach each other, the large curvature increasing and the small one diminishing more and more.

Causes.—It is an opinion generally stated in pathological treatises, that in cases of morbid dilatation there will be almost always found considerable narrowing of the pyloric orifice; but this statement is made far too absolutely, inasmuch as dilatation may exist without any such narrowing, although, doubtless, when the tunics of the stomach have undergone changes in the vicinity of this sphincter, this suffices to favour the production of morbid dilatation. It is certain that dilatation is most frequently met with as coinciding with cancer of the pylorus; but even in this case it may be as dependent upon atrophy or destruction of the muscular tissue as upon a stricture, properly so called. Dilatation of the stomach has been especially met with between the thirtieth and sixtieth years of age; and the histories of various cases show the influence which depression of the vital forces exercise in its production, and that quite independently of the presence of cancer. Injurious dietetic habits may favour its production; and it is said to be not infrequently met with in drunkards.

Symptoms.—Vomiting and the condition of the abdomen are the chief characteristics. The abundance of the vomitings is out of proportion to the amount of matters ingested; and they may contain undigested substances taken days or weeks previously. They have a special kind of rancid or putrefactive smell; and do not usually occur daily, but, as a kind of crisis, at from two to ten or fifteen days' interval. These crises increase in frequency as the disease makes progress. In some rare cases there is no vomiting at all, and in some of these the duodenum seems to replace the œsophagus, and the stomach is emptied per anum. The absence of vomiting in these exceptional cases is probably due to the intensity and rapidity of the paralysis of the stomach, to the permeability of the pylorus, and to the prevalence of anorexia having greatly diminished the amount of ingesta. Painful and excessively acid eructations and regurgitations are also observed. The condition of the *abdomen* should be examined both prior and subsequent to the vomiting; when the results obtained by percussion and *ballotement*, while the stomach is in a state of repletion, will more or less disappear after it has emptied itself, and may then be reproduced by the ingestion of liquid or solid substances. When there is no vomiting the diagnosis is difficult, and error may easily arise. Excessive frequency of vomiting may, on the other hand, be also a cause of error, by reason of the absence of obvious abdominal tumour.

Duration.—Dilatation of the stomach is generally very slowly produced, and its course is that of chronic affections, terminating after several months in cachexia, the result of inanition, fever not manifesting itself. The disease may be cut shorter when there is perforation consequent on ulceration, or when the strength has become exhausted by fruitless vomiting.

Prognosis.—Although dilatation of the stomach must be regarded as incurable when dependent on cancer or upon an almost complete obliteration of the pylorus, it may disappear when it has arisen from a purely dynamic cause, or when it has arisen from not very profound lesions—always supposing that it has not reached its extreme degree.

Treatment.—In certain cases we cannot only relieve this condition, but prevent its recurrence. When it does not arise from a mechanical obstacle, and even then to a certain extent, the dilatation is produced under the influence of dyspepsia—giving to the term dyspepsia its widest signification, as dependent upon the disturbance of the chemical or the mechanical action of the stomach, or the two actions united. This being the case, the treatment proper for dyspepsia must be put into force; and the following propositions admit of special application to the case of patients menaced with dilatation of the stomach. 1. Alimentary substances should be taken in small volume, avoiding all that are indigestible and flatulent. 2. Slow and thorough mastication and insalivation. 3. Only small quantities of fluid to be drunk, and that of a tonic character, as old Burgundy, Madeira, or Sherry. 4. A sufficient period to be left between each repast, and all physical and intellectual labour to be avoided for some time after. 5.

Stimulants suited to excite the secretions and movements of the stomach (as mint tea, aniseed, alkalis, pepsin) should be had recourse to, but not abused. A bitter infusion to be habitually taken, such as calumba or quassia, to which minute doses of tinct. of nux vomica may be added. If the disease is once formed, the dietetic precepts must be rigorously enforced, and especially as regards the small amount of aliment taken at a time. Any articles of food which are returned by vomiting unchanged must be suppressed, and others substituted. The paralysis of the stomach may be combated by means adapted to stimulate muscular contractility, as strychnine or electricity, and by others which oppose mechanical obstacles to the dilatation, such as flannel bandages, compressive belts, and astringent plasters.

M. Rilliet details two cases which have come under his own notice. The first occurred in the person of a gentleman aged 72, who, while in good health, was seized with symptoms of dyspepsia. There were acid and gaseous regurgitations and constipation, but no vomitings. The abdomen increased in size, and after seven weeks' duration of the affection a tumour was recognized, which nearly filled the abdomen, and was supposed to arise from the omentum. At the autopsy enormous dilatation was found, the food which had been taken for weeks being found accumulated in the stomach. There was no scirrhus, but a simple ulcer existed on the level of the pylorus. The second patient had from the age of twenty been a great and rapid eater, and the subject of obstinate dyspepsia. The disease to which he succumbed commenced two years after severe hepatic congestion, and lasted about ten and a half months. At first it seemed like a gastritis; but the symptoms of dilatation were soon sufficiently marked to enable the diagnosis to be made during life. At the autopsy there was found, besides the dilatation, a stricture of the pylorus, produced by vegetations of the mucous membrane and a thickening of the submucous tissue, the result probably of the cicatrization of a simple ulcer, the microscope having shown the absence of the characteristic elements of cancer.—*Med. Times and Gaz.*, Jan. 21, 1860, from *Gazette Hebdomadaire*, 1859, Nos. 17, 18, 20.

14. *Pathology and Therapeutics of Typhus Fever.*—The No. of the *Glasgow Medical Journal* for Jan. 1860, contains an interesting paper on this subject by Dr. Jos. BELL, one of the Physicians to the Glasgow Infirmary. The following are his concluding propositions:—

1. That in numerous cases of typhus, about the fifth, sixth, or seventh day of the attack, the impulse and systolic sound of the heart become feeble and ultimately imperceptible.
2. That these symptoms indicate a morbid alteration in the structure of the muscular tissue of the heart, especially in the walls of the left ventricle.
3. That this alteration resembles the usual changes which result from congestion and inflammation of muscular structure.
4. That the nature of this pathological change requires further examination and research, because the evidences on which the doctrine of its non-inflammatory origin rest, are not conclusive; the circumstances on which Louis and Stokes have placed reliance being not uniformly present.
5. That the beneficial influence of stimulants does not prove the non-inflammatory nature of the morbid change, because, in asthenic inflammation, a stimulating treatment is always necessary.
6. That whether or not the pathological alteration be owing to inflammation, the softening must be regarded as one of the special secondary effects of typhus.
7. That the proper treatment is to maintain the action of the heart by stimulants.
8. That in cases of cerebral and pulmonary disturbance arising in connection with the symptoms of cardiac softening, a stimulating plan of treatment is indicated.
9. That the presence or absence of the physical symptoms diagnostic of softened heart, may be relied on as affording trustworthy evidence, by which the sthenic or asthenic nature of these cerebral and pulmonary affections can be determined.

From these propositions it follows as a *corollary*, that it is the duty of the

physician to devote the strictest attention to the action of the heart, especially as regards its impulse and sounds, throughout the course of every case of typhus.

15. *Etiology and Treatment of Peritonitis.*—Dr. HABERSHON read a paper on this subject before the Royal Medical and Chirurgical Society, December 13, 1859. The author first alluded to the value of a knowledge of the causes of disease as a guide to right treatment, and to the importance of considering local disease as connected with a constitutional or general origin. In reference to peritonitis, he remarked that although written and spoken of as an idiopathic disease, we did not find any proof that the malady really existed in that character. An analysis of the records of 3752 inspections after death at Guy's Hospital, and extending over a period of 25 years, was brought forward as confirming this statement, and as an indication of the general plans of treatment. 501 were instances of peritonitis, and they were divided—First, into those in which the disease is set up by mischief extending to the peritoneum from without, as from adjoining viscera, injury, or perforation; secondly, those which might be called blood-diseases, connected with albuminuria, with pyæmia, or puerperal fever, or erysipelas; and thirdly, those in which general nutritive change in the system is followed by acute or chronic peritonitis, as in struma or cancer, or after continued hyperæmia of the capillaries of the serous membrane, as in disease of the liver or heart, where very slight exciting cause suffices to produce acute mischief. Of the first division, there were 266 instances, and 102 of these arose from internal or external hernia, or mechanical obstructions, and in 19 of the internal kind. Reference was made to the mode in which the extreme tension of the intestine leads to intense congestion of the mucous membrane, diphtheritic inflammation, and ulceration in the direction of greatest tension, leading to perforation in many cases. Different modes of treatment that have been used were referred to, and the use of opium alone advocated; the addition of calomel, as tending to increase the change of the mucous membrane just mentioned, without any corresponding benefit, should preclude its use. 35 were injuries or operations directly affecting the serous membrane, and in 14 had followed tapping; many injuries of the abdominal viscera, proving fatal in a very short time; this number was lower than might be expected. The value of rest and of opium in all these cases as recommended by Dr. Stokes and Dr. Graves in the treatment of perforation, was dwelt upon, as well as the injury that would result from mercury in tending to prevent localization of the mischief and increased depression. 56 were perforation of the intestine; 10 from hernia, 9 from the appendix cæci, 2 from the cæcum, 4 from cancerous disease of the colon, 9 from disease of the stomach, 15 from typhoid disease of the ileum, 4 from struma, 2 from ovarian adhesions, and 1 from cancerous disease of the vagina. In 5 other cases of fever, peritonitis had resulted, in two of which the perforation was not complete; 1 was of doubtful character, for the ulceration of the ileum was slight, and phthisis was also present. In 19 cases fecal abscess had taken place. In 42 cases the peritonitis was caused by extension of disease from the bladder, uterus, or pelvic viscera; thus, 10 from lithotomy, 6 from ovarian disease, and 14 from calculus in the bladder, cystitis, or stricture. In 11 cases, disease of the liver or gall-bladder had led to direct extension of disease to the serous membrane, and in 3 other cases it followed acute inflammatory disease of the colon, and from disease of the cæcum, not previously mentioned in three instances. Thus 261 cases from the 501 were produced by disease not commencing in the serous membrane, but propagated to it from adjoining parts; and the author stated that in each of these instances, as far as medicinal treatment could be of service, he believed that the plan suggested by Drs. Stokes and Graves in instances of perforation of the stomach was of the greatest value, in promoting rest to the intestines, the localization of the mischief, and the acceleration of reparative changes; in many instances the local depletion and the external application of anodyne remedies might be combined with advantage; but that mercury, in the form of gray powder or calomel with opium, was injurious rather than otherwise, as tending to prevent adhesions, exciting action from the bowels, or rendering their contents more fluid, and increasing the depressing effects of the disease on the nervous system. The second class of cases consisted of those in which peritonitis was

set up by a changed condition of the blood, as in albuminuria, pyæmia, etc. Sixty-three instances were connected with Bright's disease, and in nearly all of an acute kind. It was stated that the peritoneum was rarely the only serous membrane affected. The treatment of the general disease was regarded as best calculated to remove the affection, assisted sometimes by counter-irritants; but that the ready salivation produced by mercurials did not afford corresponding benefits. Ten were puerperal in their origin; in 13 pyæmia following operations, local suppuration; and 5 others were with erysipelas. Instances were alluded to in which serous membranes became simultaneously affected, perhaps pyæmic, or rheumatic, or from renal disease; and 3 of these were mentioned, one where peritonitis was connected with pericarditis and pleurisy, a second with pneumonia and dysentery, and a third with pericarditis, pleuro-pneumonia, and obscure renal mischief. As to the treatment of these cases, it was regarded that the local affection must be almost lost sight of in the general treatment, and that local depletion and mercurial preparations would not promote the cure in such instances. The *third* class of peritonitis were those connected with general nutritive changes, as cancer, struma, etc., or where, with continued hyperæmia of the peritoneal capillaries in cirrhosis, or heart disease, a very slight exciting cause suffices to produce acute disease. 70 cases rose with struma, 22 acute and 48 chronic and acute. The varieties of the stromous form of disease were mentioned, leading sometimes to serous effusions, to general adhesions, to perforation, or fecal abscess. The ages were stated not to be limited to early life, many occurring between 30 and 40 years of age. It was urged that in all these cases the same general rules of treatment should be observed as in ordinary stromous disease, sometimes assisted by counter-irritants, very cautious local depletion, anodyne applications and opium; but the avoidance of purgatives and of mercurial preparations was recommended. 40 instances of peritonitis with cancer, besides those already mentioned, were next referred to, 9 in males, and 31 in females. In men, glandular organs were generally affected; and, in women, the ovaries or uterus; but, in 20 instances, the disease consisted of tubercles upon the peritoneum, generally with dropsical effusion; 19 of these were women, and 1 a man; the average age of the former 52, and evidently coming on after the cessation of ovarian functional activity. The inutility of diuretics, and the inadvisability of depressing measures, as mercurials, were spoken of; and it was stated, that paracentesis was often followed by increased effusion of lymph, and the best treatment consisted in sustaining the ebbing powers of life by every means in our power. The *last* cases were those of peritonitis associated with hepatic or heart disease. In 32 of this hepatic complication, 14 were chronic, 12 acute, and 6 acute and chronic. 5 had been previously referred to as rendered acute by tapping. In some instances pneumonia was present, and slight exposures to cold and wet evidently sufficed to induce acute changes. The degenerative arterial changes often found with cirrhosis were mentioned, and that this chronic state should be borne in mind in the treatment of the acute disease. It was stated that, in early cirrhosis, the usual treatment of peritonitis by calomel and opium was more serviceable than any other form of peritoneal disease, on account of the stimulating effect of mercurials on the glandular organs of the abdomen; but that even here it was not necessary to produce salivation to ensure the beneficial effects. 9 cases were connected with heart disease. The general causes of peritonitis were:—

From hernia (19 being internal)	102
“ injuries; operations, as tapping, etc.	35
“ perforations of stomach, ileum, cæcum, appendix, colon, etc. (other 13 included under hernia, etc.)	43
“ And lending to fecal abscess (2 otherwise mentioned)	17
“ ulceration, with fever, without perforation	5
“ disease of the bladder or pelvic viscera; operations, as lithotomy, etc.	42
“ abscess of the liver, gall-stone, etc.	11
“ acute disease of the colon	3
“ other disease of the cæcum	3

From Bright's disease	63
" pyæmia, puerperal fever, etc.	31
" strumous disease	70
" cancer (12 before mentioned)	40
" hepatic disease (and 5 acute, from tapping)	27
" heart disease	9

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The author concluded with the following propositions: 1st. That peritonitis is never idiopathic in its origin, and that we do not find any such instance as acute disease of the peritoneum coming on from mere exposure to cold; in such case, the cold tends to render acute an already existing morbid state. 2d. That the consideration of the origin of the disease, either in a local or general source, is the best guide to treatment: whether—first, from extension of disease from adjoining viscera, as the ovaries, bladder, intestines, perforations, or injuries; secondly, from blood changes, as occur in albuminuria, pyæmia, or erysipelas; and thirdly, from almost imperceptible changes, or deficiencies, in general health, as in struma, or cancer, or climacteric changes, or as a consequence of the hyperæmia of cirrhosis, or heart disease. 3d. That, in the first form, perfect rest, the avoidance of food as far as possible, and the mode of treatment recommended by Dr. Stokes, in producing rest to the intestinal canal and peristaltic action, and diminishing the collapse and prostration consequent on the disease—constitute the best mode of treatment; using, as far as need be, other means, as anodyne applications, local depletion; and, in many instances, also seeking to remove the exciting cause, as in cystic disease, etc. 4th. That where peritonitis is a symptom of blood change, as Bright's disease, pyæmia, etc., it may be best relieved by the treatment of the primary disease; but that here opium is sometimes of great value, and more effective without mercurial combination. 5th. That in the treatment of the third class, the consideration of the cause is also our best guide; that strumous and cancerous disease should be regarded in their general relations; and in those connected with hepatic disease, the remembrance of the condition prior to the supervention of the peritonitis should prevent us from using means calculated to increase the primary mischief; and that any benefit due to mercurial action may be attained without mercurial salivation. 6th. That, in general, the benefit ascribed to mercury in the treatment of peritonitis is not established, and may, perhaps, be correctly attributed to the opium with which it is combined.

Dr. CORLAND said that the statement of Dr. Habershon could not be disputed, that in ninety-nine cases out of a hundred peritonitis, whether acute or chronic, was a consecutive, and not an idiopathic disease. In many cases, however, met with in children, it was difficult to determine what was the more immediate disease. It often arose from disorder of the digestive mucous membrane, from consecutive disease of the glands, especially the lacteal glands. In many of these instances the peritonitis was coexistent with tubercular inflammation of other serous membranes, as of the brain and pleura. The author's treatment appeared to be correct as far as it went. In the majority of cases salivation should be avoided, but there were some cases in which it was required. The author had overlooked a variety of medicines which were useful in cases of peritonitis consequent upon blood-contamination, especially the external application of turpentine by stupes or embrocations, which might go hand-in-hand with the opium treatment. In puerperal diseases scarcely a case could be successfully treated without the use of opium and the external application of turpentine. The most valuable portion of the paper were the statistics; as to the causation of the disease there was nothing new developed; and in regard to treatment the paper was very deficient.

Mr. POLLOCK said that most surgeons would agree with Dr. Habershon that, in cases of actual rupture of the intestine, mercury was worse than useless, and opium was the only treatment that could be adopted. In cases, however, where slight bruises of the abdominal wall were followed by peritoneal inflammation, producing constipation, mercury, with the addition of local or general depletion,

was often the surgeon's sheet-anchor. He remembered the case of an old gentleman who was accidentally bruised in the abdomen while in bed, and who found his bowels in a state of discomfort for a few days. About a fortnight after constipation had set in he (Mr. Pollock) saw the patient. There was distinct tenderness, and a solid mass on one side of the umbilicus extending towards the pelvis, and it was concluded that there was a portion of intestine fastened together by the effects of inflammation, and not from any rupture. On the twenty-eighth day the symptoms had very much subsided, and the pain in the abdomen had almost entirely disappeared. During the whole period he had been taking mercury to a small extent, and on the twenty-ninth day the bowels acted for the first time. That, he thought, was a well-marked instance of success resulting from mercurial treatment with very little opium. In another case, occurring in a boy who was kicked by a companion, the mercury did not produce any marked effect till the boy was fully under its influence. He thought the author had not sufficiently distinguished the cases where mercury was injurious and where it was beneficial. He would ask whether Dr. Habershon, in cases of obstruction of the bowel, particularly the large intestine, had found the peritoneal coat of the intestines give way before the mucous coat? It was, he thought, of importance not to delay too long the opening of the large bowel when constipation had taken place from any cause situated in the ascending or descending colon. He had sometimes seen rupture of the peritoneum before the mucous membrane had given way.—*Med. Times and Gaz.*, Dec. 24, 1859.

16. *The Importance of Free Respiration in Certain States of the Brain.*—Mr. CHAS. HUNTER read an interesting paper on this subject before the Western Medical and Surgical Society (Jan. 20, 1860). The necessity of attention to the respiration was considered chiefly of value: 1. In coma, from injury or disease, sanguineous or serous. 2. In narcotism of the brain. 3. In epilepsy. 4. In certain functional cerebral derangements, where a tendency to headache and lethargy exist. The strictly anatomical connection of the lungs with the brain having been alluded to, it was shown how, pathologically, disease of either of these organs might kill by its effects upon the other. 1. Cases of coma from cerebral injury and apoplexy were then cited, illustrating how death generally took place by apnoea; the practical point, therefore, indicated was, that life might not only be prolonged, but saved, by attention to the respiration, even in cases apparently the most hopeless. 2. In narcotism: the greater the insensibility in narcotic coma the more the respiration is affected; the more, therefore, it requires to be watched. Coma and narcotism both kill by the lungs; but several points of difference were shown to exist between the apnoea of coma and that of narcotism. In the apnoea of coma death is not generally (or at all events primarily) due to cessation of respiratory action, *i. e.* muscular paralysis; but to lung paralysis, evinced by extreme and rapid congestion of the lungs, accompanied by rapid effusion into the pulmonary air-cells and bronchial tubes. The death is apnoea by effusion, unless it can be warded off. The treatment for the apnoea of coma is venesection to relieve the congestion of the lungs, and prevent its further formation; but more especially important is the prone position (the prepona of Dr. Marshall Hall), by which an enormous amount of bronchial effusion may be got rid of. Without the prone position the bronchial effusion may so accumulate, that the patient with coma may, in reality, die of narcotism from non-eliminated carbonic acid gas. Artificial respiration may not be necessary. A case of apoplexy of the medulla oblongata, and one of compression from injury, were related, in which no muscular paralysis existed. In the apnoea of narcotism, there is neither the rapid effusion, nor the great congestion of coma; but if death ensues, it is chiefly from musculo-respiratory paralysis. The pulmonary congestion is less than in cases of coma, for the narcotic influence diminishes the strength and frequency of the cardiac pulsation, which are unrestrained in coma. In the treatment of narcotic apnoea venesection is not necessary; nor is prepona, to remove effusion; but it is especially necessary for a different reason, *viz.*, lingual paralysis. Artificial respiration is here invaluable; if employed, however, without attention to the tongue, it may be useless. 3. In epilepsy: the normal state of the respiration is a point in the etiology of this

disease requiring, in Mr. Hunter's opinion, careful consideration. Many epileptics have a shallow, contracted, and very feebly-acting chest, which predisposes to, and must keep up, the epileptic tendency. Several patients were alluded to whose respirations were not only very limited in amount, but in number also, being less than one to four cardiac pulsations. This feeble lung-action acts injuriously to the epileptic in a twofold way; it tends to retain carbonic acid in the blood (to which gas many of the symptoms peculiar to the epileptic besides the seizure seems attributable), and also prevents the lungs acting freely as diverticula to the cerebral circulation. 4. Among the functional cerebral derangements were mentioned headache and lethargy, which free respiration in the open air would often remove; also cases in which the respiration would sometimes, without any warning, become extremely difficult (as if from sudden deprivation of nervous influence). In such cases, fresh air, the inhalation of ether and ammonia, deep inspirations, forced (if the patient can effect them), assisted if not, appear to the author indicative and productive of great benefit in these conditions.—*Med. Times and Gaz.*, Feb. 18, 1860.

17. *On Stertor, and on the Varying Conditions upon which it is Dependent; with the Treatment necessary for its Relief.*—Mr. R. L. BOWLES read before the Royal Medical and Chirurgical Society (January 24, 1860) some very interesting observations on this subject. He commenced by stating that in the majority of instances, he had found, from experiment, that stertor arose from one of three conditions: 1st, from paralysis of the velum palati; 2d, from the paralyzed tongue lolling back in the throat; 3d, from the presence of mucus in the pharynx and air-passages. His attention was first attracted to this subject when assisting Dr. Marshall Hall in elucidating the subject of artificial respiration on the dead body. It was found that the position of the body invariably influenced the relations of the tongue, namely, that in the prone position it fell forwards and away from the pharynx; whereas, when the body was supine, it fell back towards the pharynx, and would form a serious obstacle to the passage of air into or out of the trachea. It was also observed that mucus or fluid ejected from the stomach tended to drain away in the prone position, and to remain in the back of the pharynx in the supine; and this would greatly increase the danger of apnoea in the latter. The author stated that, in November, 1857, he was called to a case of apoplexy, in which coma and stertorous breathing had persisted for some hours. The patient was wholly unconscious and uninfluenced by external impressions, and the pupils were contracted and immovable. Whilst watching the case, some fluid was ejected from the stomach, which lodged in the pharynx, and would have caused death by suffocation had not the patient been quickly turned on her side, and the fluid allowed to drain away. In this position the stertor entirely ceased, but on resuming the supine position it returned as loudly as before. The experiment of change of posture was tried several times, and always with the same result; and, what was equally remarkable, the general symptoms were greatly modified after the lateral position had been maintained for a few minutes; the pulse became calmer, the skin cooler and less bedewed with moisture, the eye sensible to the touch; and the general sensation returned to such an extent that the patient evinced signs of discomfort at the removal of a mustard poultice. In a case of epilepsy in which stertorous breathing had supervened, the moment the lateral position was assumed the stertor ceased, and the patient very soon became conscious, and recovered. Other cases were related, all of which tended, with the foregoing, to demonstrate: 1st, that the paralyzed tongue may, under certain circumstances, cause even death by suffocation; 2d, that stertor arises from the tongue falling back in the supine position of the body, so offering a serious impediment to the respiration; 3d, that mucus (another respiratory impediment) drains away when the patient is placed on the side; and 4th, that great improvement of the general symptoms follows the establishment of easy breathing in the lateral position. The anatomy of the parts was then referred to; and it was shown that the pharynx, having only a fixed boundary posteriorly, may have its capacity materially altered by the ever-varying positions of its sides, of the soft palate, the tongue, and the larynx. With the closed mouth, the tongue cannot, in the majority of cases, reach the

back of the pharynx, as it is fixed to the inside of the symphysis of the jaw; but when the jaw drops, the symphysis describes the arc of a circle, and approaches very nearly to the spine, thus allowing the tongue to come in contact with the posterior wall of the pharynx. Diagrams of some dissections were shown, to illustrate the position of the tongue and epiglottis in the various positions of the jaw and of the body. If the chin be bent upon the sternum by raising the head with pillows, the tongue will lie in dangerous proximity to the pharynx, even if the mouth be closed. Stertor was divided by the author into the three following varieties: 1st. Palatine stertor. In this, if the mouth be closed, the soft palate is pushed upwards and backwards by the base of the tongue, and thus narrows the opening between the palate and the posterior wall of the pharynx. If the mouth be open, the velum palati drops upon the tongue, and vibrates as the air rushes between it and the tongue. 2d. Pharyngeal stertor, which is the most frequent in apoplexy, and by far the most dangerous. This variety depends upon the base of the tongue dropping back into the pharynx, and acting as a serious impediment to the passage of air; it occurs when the mouth is wide open, and is a harsher and sharper noise than either of the other varieties. 3d. Mucous stertor, which depends upon the presence of mucus in the bronchial tubes; it may exist alone, or in combination with either of the preceding varieties. A case was related, to show that palatine stertor, with closure of the mouth, may accompany deep coma; but it was considered that it was the rule for persons in deep coma to breathe through the mouth, and for this reason: the muscles of the jaw being paralyzed, the jaw drops and opens the mouth; whereas, the dilators of the nose, being also paralyzed, the *alae nasi* are forcibly drawn by the in-going air towards the column of the nose, and thus close the orifice of the nares altogether. With reference to the importance of stertor, the author remarked that the impediment to the entrance of air into the lungs, as it tends to retard the flow of blood through the veins, might very possibly be the first step towards death in cases of apoplexy with degeneration of bloodvessels, or fracture with laceration of the sinuses or vessels of the brain; for the blood would make its way, where there was least resistance, through the wounded or ruptured vessel. If, however, there were no obstruction in its natural course, it would more probably follow that, than turn aside through an opening, in which perhaps a coagulum had already formed. Besides the ultimate dangers which might result from a persistence of stertor in apoplectic and similar conditions, the more immediate dangers of the supine position were pointed out—*e. g.*, 1st. Fluids or other foreign matters making their way into the larynx from the mouth or stomach. 2d. The falling back of the tongue, causing sudden and complete apnoea, which may occur in all cases of paralysis, whether from syncope, apoplexy, concussion of the brain, chloroform poisoning, suffocation from carbonic acid or drowning; for if a disaster arise from any of the above conditions, the patient is almost invariably laid flat on the back. The paper was concluded by the relation of a case, by Mr. Lewis, of Chester, of profound coma supervening upon several severe attacks of epilepsy, following each other in quick succession. When the patient was seen, the pupils were contracted and insensible; the pulse small, weak, and irregular; the surface pale, with cold, clammy perspiration; breathing irregular, slow, and extremely laborious. The stertor was very marked; very little air seemed to enter the lungs; the cheeks were puffed out during expiration. The patient was placed well over on his side. There was an immediate flow of saliva from the mouth, followed by a considerable quantity of sanio-mucous fluid. The breathing instantly became more free, and in less than a minute all stertor had ceased. The other symptoms gradually subsided, and in an hour's time, the bowels having been acted on by croton-oil, there was a partial return to consciousness, and the next day the patient was walking about the wards of the asylum.

18. *Sugar in the Urine.*—M. HENRY MUSSEY states that "sugar in the urine does not necessarily imply the existence of diabetes. One may pass sugar with the urine, and yet enjoy perfect health. Dr. Blot has shown that sugar exists normally in the urine of all women during parturition, of nurses, and of a certain number of women during pregnancy. Dr. Leudet has shown in paraplegic

patients that there is a constant relation between the appearance of the nervous cerebral accidents and the glycosuria. Dr. Itzigsohn relates a remarkable case of traumatic diabetes, occurring in a blacksmith who had received a blow on the top of the head. Dr. Todd has also given a case of diabetes which was observed in a woman after she had received a blow on the head. Prout observed sugar in the urine of dyspeptics and aged persons, and Dr. Goolden in children during dentition. Thus, then, there are numerous circumstances, physiological and pathological, which, directly or indirectly, concur in the formation of sugar in the economy. Can we now, with M. Mialhe, explain the presence of the sugar in the urine, by the greater or less alkalinity of the blood, which in the latter case cannot transform the glucose—the glucose then becoming a foreign matter in the body, and so discharged by the kidneys? Or, with M. Bouchardat, shall we explain the glycosuria by supposing the presence of some peculiar principle, which has an action on starch like that of diastasis? Then, again, we have the explanation, resulting from discovery of the glycogenic function of the liver by M. Bernard, viz., that the function of this organ is impeded, and the sugar thrown into the general circulation. When, however, we consider, that in everybody there are products which are returned by the lymphatics into the general circulation; that the transformation of starch goes on normally in the intestines; and that it is accomplished even in the mouth under the influence of the salivary diastasis; and if, moreover, we recollect—that glycosuria accompanies dentition, dyspepsia, certain cerebral disturbances, that it may be caused by irritation of the brain at the origin of the eighth pair of nerves; that it exists in pregnant and parturient women and nurses—are we not naturally brought to the conclusion, that diabetes is a neurosis troubling the harmony of the assimilating functions?"—*Med. Times and Gaz.*, Dec. 10, from *L'Union Méd.*

19. *Action of Iodide of Potassium on Phthisis.*—Dr. R. P. Corron gives (*Med. Times and Gaz.*, Dec. 24, 1859) the results of his experiments with this article on twenty-five patients taken indiscriminately from those who came to the Hospital for Consumption, Brompton.

"The iodide was administered in doses varying from five to seven grains, twice, and in some instances, three times a day, simply dissolved in pimenta-water. The cases consisted of thirteen males and twelve females, their respective ages varying from 16 to 44, the majority being about midway between the two. In eleven, the disease was in its first stage; in two, softening had commenced; and in twelve, there was unmistakable evidence of more or less pulmonary excavation. The medicine was continued, according to its effects, from a period varying from three to ten weeks. Whenever it seemed, after having been taken for four weeks, to be producing little or no good, it was discontinued, and the subsequent progress of such patient under other treatment carefully observed.

"In two instances, headache was complained of; in six, there was more or less dyspepsia, flatulence, or loss of appetite; and in three cases, hæmoptysis occurred. Whether such symptoms were the *post* or the *propter hoc* it was rather difficult to determine; there seemed to be no reason, however, for suspecting the latter in the cases of hæmoptysis; but, from subsequent observation, the headache and dyspepsia were fairly attributable to the iodide.

"In order to obtain comparative results, in eight cases the iodide was combined with cod-liver oil, and in seventeen administered alone.

"There was a visible improvement in eleven of the patients; six of these being in the first stage of the disease, and the rest more advanced; in six instances there was no change either one way or the other; and in eight the disease advanced more or less rapidly.

"In making an analysis of the eleven improved cases, it was found that in six of the number the iodide had been taken in conjunction with cod-liver oil, and that in five it was taken alone. The most marked improvement was certainly where the two had been associated. In only three cases, where the iodide had been taken by itself, had the patient's weight increased, whilst in ten it had diminished, and in four remained unchanged. Out of the entire twenty-five cases, therefore, only in five could it be fairly argued that the iodide had been of service; and when it is remembered that patients coming into the hospital are

immediately placed under greatly improved circumstances, both as to general hygiene and diet, the good effect of the medicine, even upon these five patients is very far from being demonstrated.

"Four patients, who either had received no benefit from the iodide, or with whom it had disagreed, improved afterwards very much, and gained considerably in weight, under the administration of steel and cod-liver oil.

"In four cases, during the use of the iodide of potassium, there was a marked amelioration in the pulmonary symptoms; the breathing became less difficult, and the cough and expectoration diminished; but here again it is fairly open to question whether such improvement was due to the iodide, or to other and concomitant circumstances.

"From the above observations I think we may arrive at the following conclusions, viz:—

"1. Iodide of potassium given in moderate doses to consumptive patients, occasionally produces dyspeptic symptoms; but more commonly is unattended by any marked result either in one direction or the other.

"2. Under its use the weight is seldom increased, but either remains stationary, or is diminished; the latter effect being of most frequent occurrence."

20. *Treatment of Tetanus by Aconite*.—Dr. LEONARD W. SEDGWICK, of Broughbridge, relates (*British Medical Journal*, January 28th, 1860) the following instructive case of this:—

"A farmer's labourer, aged 30, strong and muscular, healthy and temperate, in jumping off a cart with a dung-fork in his hand, stuck it into his left thigh about three inches above the knee-joint on the inner and anterior surface. For some days the knee was stiff, and he was unable to work. Ten days afterwards, being much better, he began chopping sticks. About noon he got wet; and, whilst at his dinner, he was seized with a sharp pain between his shoulders; at the same time he thought he could not open his mouth as well as usual. On the eleventh day, he was unable to work from acute pain in the back and jaws.

On the twelfth day from the accident, and the third of the tetanus, I saw him. He was then lying on his back, perspiring intensely, with an anxious, painful expression of countenance. His jaws were nearly closed; the muscles of the back were very rigid; the loins were almost always some distance off the bed; the arms were not much affected; the legs were stiff; the abdominal muscles hard. Pulse 95, not very full. His tongue was moderately clean. The bowels were regular. He had no sleep. The urine was natural. I ordered him beef-tea and six ounces of brandy in the day; and five minims of Fleming's tincture of aconite in water every four hours. I laid open the wound, and removed a considerable piece of woollen cloth, which had been driven in from his trousers by the fork. To save repetition, I may here state that the wound healed steadily.

Fourth day. He was much the same.

Fifth day. The spasms were not so constant, but more violent. No aconitism had appeared. Seven minims of the tincture of aconite were given every four hours.

Sixth day. He was worse. When the spasms were relaxed, which was only for a very few minutes, the pulse was 68; during the spasms, it rapidly rose to 120, and became smaller. Opisthotonos was extreme; the jaws were clenched. Ten minims of the tincture were given every four hours; and he was ordered to have ten ounces of brandy daily.

Seventh day. Tingling in the hands and feet and slight giddiness having come on, the spasms had been much less severe. The pulse was weaker, and he had great sleeplessness and restlessness. The aconite was omitted; and twenty minims of chlorodyne were given in an ounce of water every four hours.

Eighth day. He continued easier, and slept well. The pulse was stronger. The spasms were not so frequent. He complained of much pain from flatulence. Twenty minims of tincture of sumbul were given with the chlorodyne. I may remark, that I have seen more benefit from sumbul in flatulence than from any other drug.

Ninth day. He took more beef-tea, etc., and was improving. The flatulence was diminished.

Tenth day. Immediately after being startled by a loud noise, he had a violent spasm, lasting some time. It recurred at intervals with great violence. He was ordered to have three minims of tincture of aconite and ten of chlorodyne in an ounce of water every four hours.

Eleventh day. He was much the same. The dose of tincture of aconite was increased to four minims.

Nothing of importance occurred until the seventeenth day. He continued the mixture, and the cramp decreased. The bowels having been confined several days, he had a turpentine enema, which greatly relieved him, and was repeated every other day. On the seventeenth day, some tingling came on, and continued until the nineteenth, though the aconite was reduced to a minim and a half every four hours. On that day the aconite was suspended. The next day there was more cramp. The aconite was resumed for a week longer, and he gradually recovered. In less than three months he was at work again. The muscles were some time in regaining their extensibility after the tetanic spasms had ceased.

Remarks.—The subjects for consideration are, the severity of the attack; the action of the aconite; the effect of the chlorodyne; the chances of spontaneous recovery; and the value of the case as a guide to future treatment.

It was unquestionably a most acute attack. A punctured wound, containing an irritating foreign body, prevents a man from working for ten days. He gets wet; and immediately tetanus sets in, and rapidly worsens. Every muscle of the body is racked with cramp; more than half his time he rests on his head and his heels; every step across the floor, every noise in the house agitates him with this torturing spasm; and from this agony he is free for only two or three minutes at a time. To those who saw him, it was truly a most severe case.

If I have related honestly and faithfully what I most certainly saw, there will be little reason for any detailed argument as to the action of the aconite. When the symptoms of aconitism came on, then, and not till then, did the symptoms begin to abate. Twice, when the aconite was suspended, once to try the effect, once because the tingling and giddiness were becoming extreme, did the spasms return, to abate again on the resumption of the drug. This contratetanic action of the aconite is rendered more probable by the large doses which were originally borne, a part of the remedy seeming to be neutralized, as it were, by the disease, and only the superfluity able to produce its poisonous effect. This view will explain why smaller doses produced greater effects towards the end of the case, there being then less disease to combat.

Perhaps some justification is necessary of the administration of the chlorodyne. Perhaps it may be objected, that I marred the decision of the result by its use. I do not think so. I have often seen the good effects of chlorodyne in producing quiet without depression. Here was a man under the influence of aconite—sleepless, intensely and emphatically restless. My object was to cure him, not to conduct an experiment only. I saw reason to believe that chlorodyne would relieve the disagreeable symptoms probably produced by the aconite, and it did so. But there was no repression of the spasms as a result of its use; for twice it was given alone, and each time the spasms returned, to be reduced again by the aconite. Useful, then, in relieving a disagreeable accident, it had no power to stand against the tetanus.

If I have succeeded in demonstrating the acute nature of the attack, the extremity of the symptoms, and the contraspasmodic action of the aconite, there can be little need to say anything of the chances of spontaneous recovery. He might have beaten the disease; but, from all we know of tetanus, we may be pretty sure that it would have gained the day.

What, then, is the value of the case? Does it contain hope for the future, or is its successful termination merely a fortunate accident? I cannot but think that it is full of hope, more especially when taken in connection with previously reported cases. Of course it is not conclusive; it cannot be. But it points very decidedly to a certain path, by following which, there is more hope of arriving at the wished for goal than by the old well trodden tracks. Aconite has never had that thorough testing that opium, for instance, has. So far, it seems to me most useful; further experience will determine its true value. But little persuasion should be required to induce a fair and extended trial of

its powers, not by one or two, but by many; for, in such matters as this, 'in a multitude of counsellors there is safety.' Nor need we restrict our notice to aconite alone; it is only one of a class of medicines which has yet had little attention paid to it—all powerful, even violent, in their action, and many, I am convinced, containing 'a soul of good' within them, which as yet we have not 'observingly distilled out.'

21. *Chlorine Lotions in Variola.*—Several young persons having died asphyxiated at Würzburg, in consequence of the development of the pustules of variola or varioloid in the larynx, Dr. EISENMANN was induced to seek for a means which would limit the eruption to the skin, and prevent its propagation to the mucous membranes.

Most of the acute exanthemata take their origin in a mucous membrane, as scarlatina in that of the throat, and rubecula in that of the respiratory organs and eyes: and as long as it remains localized in the mucous membrane, and is moderate, the affection of the internal organs is not dangerous. But when the course of the subsequent eruption on the skin becomes impeded, or, that when it appears it is in such intensity or abundance, that the economy does not possess sufficient energy to meet the assault, the primary affection of the mucous membrane may then so increase as to give rise to dangerous lesions. The indications which we should have in view are to favour the eruption of the exanthem, and prevent the skin becoming excessively overcharged with it. The asphyxia above alluded to took place when the eruption had undergone a vivid development and had given rise to abundant pustules: and our object in such case should be to moderate the reflex action of the exanthem on the economy. The means of doing this the author believes will be found in applying over the whole surface three or four times a day weak, tepid, chlorinated water, in imitation of a practice successfully pursued by M. Schönlein in scarlatina. He has now tried the plan during various epidemics, and has been able to confirm his own experience by that of others. The general conclusions are as follow:—

1. That chlorine lotions employed at the period of eruption present the following advantages. (1.) They favour the development of the eruption, and thus mitigate febrile action. (2.) The pustules are not too abundant, and do not become confluent. (3.) There is no subsidence or repercussion of the pustules observed, nor any variolous affection of the mucous membrane or of an internal organ. (4.) The patients suffer little during the height of the exanthem, preserve their appetite, and sleep well. (5.) The course of the exanthem is very rapid; and there is neither suppuration with its consecutive fever or tumefaction, salivation, etc. (6.) Scabs do not arise, only thin pellicles forming which soon fall, without leaving any mark or cicatrix. (7.) No consecutive affections are observed. 2. When resorted to only after the eruption has taken place, the lotions produce the following effects: (1.) They diminish or disperse the inflammatory condition, and accelerate the course of the exanthem. (2.) They prevent its repercussion and the propagation of the variolous affection to the mucous membranes and internal organs. (3.) In cases in which the mucous membranes have already become affected, the lotions exert a derivative action; and if together with them gargarisms, chlorine inhalations, and chlorinated water internally are had recourse to, the intensity of these complications is much diminished, so that recovery takes place in cases in which life seemed to have been in great danger. (4.) Employed in good time, the lotions, even when the eruption has become developed, may yet prevent suppuration. If, however, this has taken place, it may still be moderated; and we find neither irritation of the skin, nor intoxication of the blood from absorption of pus, and consequently, no general reaction. (5.) Thin scabs only are formed, which soon fall off, only leaving temporary red marks. (6.) No consecutive diseases arise.

This means is beyond comparison superior to the variety of ectrotic applications having for objects the prevention of pitting, for these, when they can be borne, at most confer this local advantage without diminishing the severity of the disease. It is true that applications of corrosive sublimate or tincture of iodine exert a somewhat similar action on the variola to chlorine; but no one would risk making repeated and general applications of the former; while the

males, and 118 in females. The difference becomes more marked with the advance of life; for while under 7 years of age, 17 boys and 30 girls belonged to this group, between the years of 8 and 13, there were but 8 boys to 88 girls. Scrofula and tubercle exhibited themselves in the proportion of 305 in girls to 269 in boys. Until the course of the second year, there was a preponderance in the males (86 boys to 69 girls); but after the fifth year there were, owing to the greater frequency of pulmonary phthisis among them, 121 girls to 72 boys. Rickets were observed in 577 boys and 610 girls, the disease being later developed and more enduring in girls than in boys. Congenital syphilis was observed in 36 boys and 49 girls. 7. Chronic diseases of the skin occurred in 903 of the 10,000 cases of disease; but no marked difference from sex was observed prior to the ninth year, after which period girls were found much oftener subject (88 to 31), and especially to diseases of the scalp, than boys. 8. Enlarged thyroid gland was met with in 15 male and 35 female children—25 of the latter having passed the ninth year.—*Med. Times and Gaz.*, Dec. 24, from *Journal für Kinderk.*, Bd. xxxii.

25. *Angina Pharyngea Edematosa in Children.*—Dr. WERTHEIMER desires to call attention to a variety of common angina, characterized by serous infiltration of the submucous tissue of the pharynx. The four cases which he has met with occurred in children of the respective ages of seven weeks, three months, eighteen weeks, and ten months. In all of these difficult and "rattling" respiration first calls attention to the malady, and, on examining the throat, large accumulations of loose, foamy mucus are observed attached to the isthmus and pharynx; and on the removal of this, all those parts possessed of a loose submucous tissue, are found to be excessively swollen—especially the uvula and tonsils. The mucous membrane is pale, smooth, and to the touch soft and sticky. The mucous membrane itself, and especially the glandular apparatus, plays the chief part in the affection. The dyspnoea, although considerable, does not become so urgent as in various other affections, such as oedema of the glottis, croup, etc. The respiration is very noisy, and accompanied by an expiratory snoring sound. The voice undergoes some change, and the cry of the child is less clear, but it is never hoarse as in affections of the larynx, or suffocative as in severe inflammatory affections of the lungs. Swallowing and sucking are difficult, but not painful; but the child chokes frequently, and at last refuses all nourishment. There is not usually any fever present. In two of the author's cases the course of the disease was acute (five and nine days), and in the other two, chronic; and they all recovered. The prognosis of the affection is, therefore, favourable; the prolongation of the disturbance of nutrition being the most unfavourable feature.

Edematous angina is, in many respects, nearly related to catarrhal angina, but is distinguished by the almost suddenness with which exudation takes place, while, besides the tumefaction of the mucous membrane and the accompanying excessive secretion of mucus, there is also deposited a watery exudation, partly on the surface and partly within the cellular substance. From this result the looseness and fluidity of the secretion, and the peculiarly loose kind of intumescence of the structures implicated. This disease, like catarrhal angina, doubtless in some cases requires an active therapeutical agent; but in other cases assistance is called for. Emetics are then especially useful, the author preferring infusion of ipecacuanha with oxymel of squill; and sinapisms applied to the neck for a few minutes are sometimes desirable. When the affection assumes a chronic form, pencilling the parts with a solution of nitrate of silver is of use.—*Med. Times and Gaz.*, Dec. 24, from *Journal für Kinderk.*, Bd. xxxii.

26. *Faradization of the Diaphragm in Asphyxia from Chloroform.* By Dr. FRIEDBERG.—A boy, aged four years, inhaled chloroform from a sponge prior to undergoing an operation for the removal of a small tumour of the lower eyelid. At most 5j was employed, and in less than two minutes alarming appearances were produced. The pulse had become very small, the respiration consisted only in a short, rattling inspiration, the face was livid, and the limbs were relaxed. Windows were opened, cold water was sprinkled on the face, ammonia

was applied to the nostrils, and a small sponge was carried down to the epiglottis, in order to remove any mucus and to endeavour to excite coughing—the thorax being at the same time rubbed, and sometimes dashed with cold water. These means might have been employed for two or three minutes, when a further change in the child's condition was observable. The pulse had now quite ceased, the countenance was that of a corpse, and the lower jaw had dropped. When the eyelids were separated to examine the pupils (which were dilated), they remained gaping. As no time was, evidently, to be lost, the author had recourse to artificial respiration. He did not endeavour to induce this, however, by the insufflation of air, regarding that as a very uncertain procedure. The methodical compression of the abdomen is a much better one, and was executed. While an assistant compressed the abdomen with both his hands beneath the navel, in order to prevent the viscera receding below, the author pressed the upper portion of the abdominal walls towards the diaphragm, removing the hands then immediately, in order to allow of the expansion of the lungs. This rhythmical procedure was kept up for about three minutes without any appreciable advantage. A complete relaxation of the diaphragm, in fact, existed, as there was neither resistance offered by it to the passage of the hand or any subsequent vaulting of the epigastrium. It was now resolved to Faradize the diaphragm, in order to induce its contraction. One of the conductors of Bois Reymond's induction apparatus was applied over the phrenic nerve (where the omohyoideus lies at the outer edge of the sterno-cleido-mastoideus), and the other to the seventh intercostal space, pressing this latter deeply towards the diaphragm. The Faradization was performed sometimes on one side and sometimes on the other, the stream being interrupted ten times on the contraction of the diaphragm giving rise to vaulting of the epigastrium, a short sob occurring at the same time. The Faradization being now suspended, a slight spontaneous inspiration occurred, which was followed by a second and third, and a temporary reddening of the face, the pulse also becoming perceptible. Compression of the abdomen was again resorted to, the tension of the diaphragm not offering its proper resistance. The attempt to suspend the compression at the end of ten minutes of its employment was attended with an immediate enfeeblement of the respiration and pulse. It was therefore resumed for another ten minutes, the extremities being also rubbed, the face sprinkled with water, and ammonia applied to the nose. The recovery at last became so complete, that the operation was proceeded with, and the child did very well.—*Med. Times and Gaz.*, Feb. 25, from *Virchow's Archiv.*, Bd. xvi.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

27. *Acupressure—A New Method of Arresting Surgical Hemorrhage.*—At the first winter meeting of the Royal Society of Edinburgh (Dec. 19, 1859). Prof. J. Y. SIMPSON made a lengthened communication on acupressure, as a new mode of arresting surgical hemorrhage. After describing the various methods of stanching hemorrhage in surgical wounds and operations, which the Greek, Roman, Arabic, and Mediæval surgeons employed, he gave a short history of the introduction of the ligature of arteries, and spoke of it as the hæmostatic means almost universally employed in chirurgical practice at the present day. But he thought that surgery must advance forward a step further than the ligature of arteries—particularly if surgeons expected, as seemed to be their unanimous desire, to close their operative wounds by primary adhesions of their sides, or by union by the first intention.

Dr. Simpson stated that he had tested the effects of acupressure as a means of effectually closing arteries and stanching hemorrhage first upon the lower animals, and lately in two or three operations on the human subject. The instruments which he proposed should be used for the purpose, were slender